

1 **WHAT IS CLAIMED IS:**

2 1. A mechanical crayon pen with an internal cartridge for multiple
3 crayon sticks comprising:

4 a transparent barrel (10) having an open top (12), a bottom tip (11),
5 an inner diameter, an outer diameter and an inner surface;

6 a thrust device (20) mounted inside the transparent barrel (10) and
7 having

8 an inner tube (21) movably mounted inside the transparent
9 barrel (10), wherein the inner tube (21) has an outer surface, a top end,
10 a bottom end and an outer diameter smaller than the inner diameter of
11 the transparent tube (10) so that a space (13) is formed between the
12 transparent barrel (10) and the inner tube (21) to hold the multiple
13 crayon sticks;

14 a hollow shaft (24) having a top end pressed into the bottom
15 end of the inner tube (21) and a bottom end;

16 a clutch ring (23) mounted at the bottom end of the hollow
17 shaft (24) and accommodated at the bottom tip (11) in the transparent
18 barrel (10); and

19 a spring (22) mounted around the shaft (24) between the
20 bottom end of the inner tube (21) and the clutch ring (23); and

21 a thrust actuator (30) detachably mounted on the open top (12) of the
22 transparent barrel (10) and having

23 a cap (32) with a central hole (321) rotatably mounted on the
24 open top (12) of the transparent barrel (10) ; and

1 a pushbutton (31) detachably and movably mounted on the
2 cap (32) to push the inner tube (21) downward.

3 2. The mechanical crayon pen with an internal cartridge to hold
4 multiple crayon sticks as claimed in claim 1, wherein multiple longitudinal
5 grooves (14) are defined on the inner surface of the transparent barrel (10).

6 3. The mechanical crayon pen with an internal cartridge for multiple
7 crayon sticks as claimed in claim 1, wherein the push button (31) has:

8 a head (314);

9 a column (313) with a bottom face attached under the head (314);

10 an abutting shaft (312) formed on the bottom face of the column and
11 protruding into the inner tube (21) to push the inner tube (21) downward; and

12 a recoiling spring (34) mounted around the abutting shaft (312).

13 4. The mechanical crayon pen with an internal cartridge to hold
14 multiple crayon sticks as claimed in claim 2, wherein the push button (31)

15 has:

16 a head (314);

17 a column (313) with a bottom face attached under the head (314);

18 an abutting shaft (312) formed on the bottom face of the column and
19 protruding into the inner tube (21) to push the inner tube (21) downward; and

20 a recoiling spring (34) mounted around the abutting shaft (312).

21 5. The mechanical crayon pen with an internal cartridge to hold
22 multiple crayon sticks as claimed in claim 1, wherein the mechanical crayon
23 pen further has a dividing wall (15) formed within the space (13).

24 6. The mechanical crayon pen with an internal cartridge to hold

1 multiple crayon sticks as claimed in claim 2, wherein the mechanical crayon
2 pen further has a dividing wall formed within the space (13).

3 7. The mechanical crayon pen with an internal cartridge to hold
4 multiple crayon sticks as claimed in claim 5, wherein the dividing wall (15)
5 has an outer surface and multiple longitudinal grooves (152) are defined on
6 the outer surface of the inner tube (21).

7 8. The mechanical crayon pen with an internal cartridge to hold
8 multiple crayon sticks as claimed in claim 7, wherein the cap (32) further has
9 an access (322) formed in the cap (21) over the space (13) and a clip (324)
10 extending downward from edge of the cap (32).